



Update 2013 Integrated Water Management Finance Planning Framework *Session 1 - Background and Scope*



Prepared for: California Water Plan Plenary

September 12, 2012

Update 2013 Finance Planning Framework

This is a strategic long term planning framework and is NOT intended to change or supplant:

- (1) Ongoing State grant and loan activities
- (2) Specific State programs or projects that are currently being planned or implemented
- (3) Local or regional governance and finance

What is Integrated Water Management (IWM)?

Operational Explanation for Plenary

Multiple Dimensions:

Topics: Flood management, water supply and quality, environmental assets and systems, more on this later

Institutional: Alignment of all State policies that pertain to the suite of IWM topics

Planning: Transparent and inclusive

Principles: Sustainability and multi-objective solutions

Update 2013 Finance Planning Framework

Water Plan Plenary - September 12 & 13:

- Framework Background and Scope of IWM
- History of Resource Management Funding
- Principles for Investment Priorities and Apportioning Costs
- Cost of Forgone Future Investment
- Future IWM Role of State Government & Criteria for Crafting Recommendations

Update 2013 Finance Planning Framework Framework Background and Scope of IWM

Topics for this session:

- Where We Have Been
- Purpose and Applications of Finance Framework
- Content and Flow of Information
- Draft Framework Narrative
- Scope of IWM
- IWM Activities Categories

Update 2013 Finance Planning Framework

Where We Have Been - Summary

- **IWM finance innovation is much more complex than determining the “who and how” of future funding**
- **A comprehensive IWM finance planning framework has been developed**

Update 2013 Finance Planning Framework

Where We Have Been - Process

- **Eight Finance Caucus Meetings**
- **Three Caucus Subcommittee Meetings**
- **Four Advisory Committee Meetings**
- **Five State Agency Steering Committee Meetings**
- **Joint Finance Caucus/State Agency Meeting**

Update 2013 Finance Planning Framework Where We Have Been - Content Developed Storyboard

Draft Storyboard for Water Plan Update 2013 Finance Plan June 1, 2012

Purpose and Use

This document is intended to enable diverse California Water Plan stakeholders and planning partners to: (1) initiate discussions and develop a common language and vision surrounding state integrated water management (IWM)-related activities and funding¹; and (2) collaboratively develop a framework for planning future State government IWM activities and funding. The purpose of the eventual finance planning framework will be to synthesize information and stakeholder input such that it supports actionable State-administered IWM finance recommendations for State policymakers.

Assumptions about the Future

In order to develop practical decision support for future State IWM activities, many assumptions must be made about future conditions. The framework for preparing the finance plan will include a method for articulating priorities at different scales (regional and statewide) and under different sets of assumptions about the future. Assumptions and, in some cases, estimates will be made regarding key drivers, such as future funding levels, future climate expectations, planning horizons and perhaps more, as deemed relevant by water plan participants. Given that there are many different levels of uncertainty associated with various future assumptions and estimates, this framework will enable articulation of confidence levels (qualitative or quantitative) in conjunction with each assumption and estimate. The final recommendations will result from emerging patterns of activities/areas where future State IWM funding should be directed.

Overview

Eight components for developing the Update 2013 finance plan framework are listed below in the form of a storyboard. Note that the components indicate a logical order of information as opposed to work sequencing. The actual work plan will rely on parallel progress on several components. This document was refined based on many suggestions from the Public Advisory Committee, Finance Caucus and other participants. The following suggestions were used to guide the storyline presented below.

- Avoid presupposing any occurrence, scope or magnitude of future State IWM roles, programs, activities or funding.
- Establish key definitions early in the process.
- Build a framework that incorporates IWM perspectives of multiple jurisdictional scales (e.g. federal, State and local).
- Build a framework that incorporates the many actions or policies typically associated with IWM.
- For Update 2013, focus on the most critical IWM activities/needs/plans.
- Clarify the role of State government and focus the finance plan recommendations on actions to be administered by the State government.
- Clarify the role of federal government in implementing and funding IWM activities in California
- Include a method for making recommendations under a variety of possible future conditions, particularly regarding significant future funding constraints/limitations.

¹ Integrated water management is a collection of policies, practices and tools applied to water resources planning and management to achieve multiple objectives and enhanced outcomes.

COMPONENT 1 — SCOPE AND OUTCOMES

What is the scope of the finance plan in terms of targeted resource management objectives and outcomes? This is the first component in defining the scope of the State's future involvement in IWM activities and finance. This first component includes targeted benefits expressed at the federal, tribal, State, regional and local levels. Activities, policies and processes will be identified in Component 2 below.

The scope of the finance plan has been proposed and includes the following benefits:

- Drought preparedness.
- Energy benefits.
- Water quality.
- Water supply and supply reliability.
- Flood damage reduction.
- Recreation.
- Environmental.
- Fuel load reduction.
- Climate change risk reduction.
- Affordability.
- Groundwater overdraft reduction.
- Food security.
- Operational flexibility.

COMPONENT 2 — IWM ACTIVITIES

What IWM activities must occur to generate targeted benefits? In order to create actionable finance recommendations, the activities required to create the benefits identified in Component 1 must be identified. This component will be applied at both the regional and State levels. Information on activities, and their costs and expected benefits (including supporting information regarding any accompanying estimates, methods or assumptions), will be compiled from the 48 IRWM planning efforts. The State Agency Steering Committee will perform a similar task for State-administered IWM activities.

The framework will include categories for the activities for organization purposes but, more importantly, to apply an optimum scale for guiding State IWM investment (i.e., generally roll-ups of various types of regional projects or programs) in a way that is relevant to regional activities (i.e., generally project-level).

The following categories were developed by the Finance Caucus:

- Innovation and administrative activities (governance, planning and public process improvements, information technology/data and tools, and water technology research and development).
- Infrastructure (natural and human) (implemented at various geographical and jurisdictional scales such as local, groundwater basin, watershed, regional, interregional, State, interstate, international and tribal).

Update 2013 Finance Planning Framework Where We Have Been - Content


Prepared Finance Planning Framework

Update 2013 Finance Planning Framework (Shown integrated into Volume 1)

August 24, 2012

This document describes the approach for building the Update 2013 financing planning framework into Volume 1 of Update 2013. Water Plan Plenary finance sessions are made available to describe the purpose and general idea of each section. It will not necessarily appear in the chapter. The text below each heading is instructional text, to describe the content that will appear in the chapter.

This document provides an indication of probability that each respective section of the finance planning framework will be completed for Update 2013. Sections that are not completed for Update 2013 will be completed for Update 2018. The definition of "completed" involves three primary considerations: (1) a method or process is in place for producing desired deliverables (including framework development, stakeholder involvement, data collection capability, etc); (2) analytical tools required to produce desired trade-offs analysis are in place; (3) some level of stakeholder agreement occurs. An operational definition of "completed" is that all three dimensions converge to support findings and recommendations with reasonable levels of uncertainty. Green = Higher Probability of Completion for Update 2013; Yellow = Moderate Probability of Completion for Update 2013; Red = Lower Probability.

Chapter 1 - Introduction	Chapter 2 – CA Water Today	Chapter 3 - Imperative to Invest (in Innovation and Infrastructure)	Chapter 4 State and Federal Companion Plans
Plenary Finance Session 1 <i>Framework Background and Scope of IWM</i> Definition and Scope of Integrated Water Management; Finance Planning Framework This section will describe: (1) The definition and scope of integrated water management (IWM). (2) How many policymakers and stakeholders have expressed a need for an IWM finance planning effort. (3) How California is expected to face significant challenges surrounding IWM financing due to the near full allocation of existing bond funds, protracted recession, deferred investment, etc. (4) The intended applications of the finance planning framework. IMPORTANT MESSAGE - Emphasis on the value of the framework to this and other future IWM finance efforts (as a framework for working through the layers of issues required to get to IWM funding and implementation) is a key message of the Finance Plan storyboard. The storyboard's development and implementation are key to the finance planning framework.	Plenary Finance Session 2 <i>Follow the Money</i> Resource Management Funding History This section will provide a description of historical federal, State, and local IWM investments as context for planning future State IWM investment. It will also include a variety of data and information to provide a full understanding of how current conditions have evolved to be (e.g. debt levels, funding sources, administrative constraints, etc). State, Local and Federal Government IWM Spending Summary This subsection contains a generalized characterization of State IWM spending from fiscal years 2000/2001 through 2011/2012 using the categories developed in storyboard component 2 (e.g innovation and infrastructure). To the extent possible, it will also include similar data for local and federal spending. Contextual messages will be articulated as necessary to help provide a full enough understanding to make informed decisions.	Plenary Finance Session 3 <i>Consequences of little to no future investment</i> Cost of Limited or Forgone Investment This section will convey a sense of urgency to implement Update 2013 recommendations. It includes a description of the implications of very limited investment in IWM (e.g. that may not even begin to implement activities that are considered critical or high-priority). Implications or resulting conditions can be expressed in terms of environmental, economic, and social effects of deferred implementation; forgone opportunities or benefits; and other unfavorable consequences.	Existing Finance Strategies This section will provide a narrative regarding the disintegrated, constraining and complex nature of current State IWM financing as observed while synthesizing and integrating companion plans. It will also describe incidental water-related benefits occurring as a twofer from various programs where water management is not the primary objective (e.g. land management, pesticide research, etc).
		 Description and Clarification of the Role of State Government in IWM Plenary Finance Session 5	
		Qualitative Only	

Update 2013 Finance Planning Framework

Where We Have Been - Content

Compiled and Synthesized Historical Federal, State and Local Spending

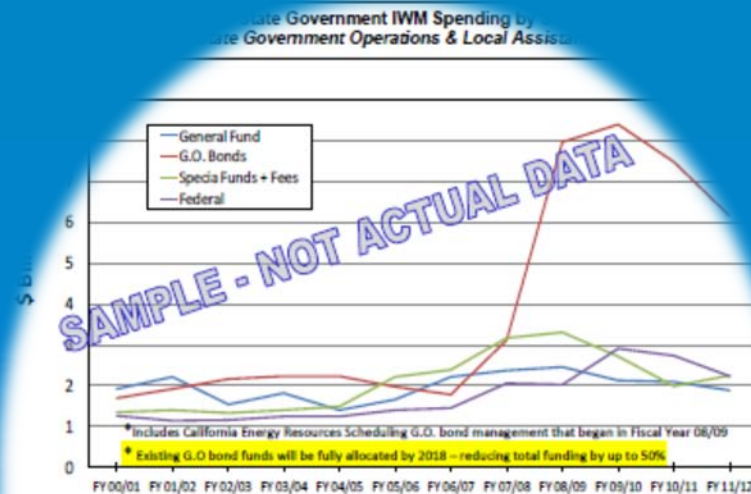


FIGURE 2-3: Total State Government IWM Spending by Source Category (Includes State Government Operations & Local Assistance Spending)

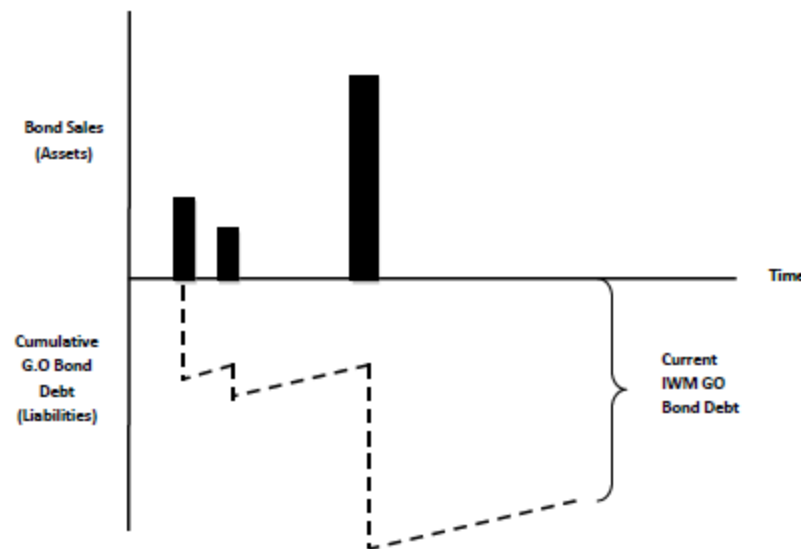


Update 2013 Finance Planning Framework

Where We Have Been - Content

Defined Current G.O. Bond Debts/Debt Service

FIGURE 2 -4: IWM-Related General Obligation Bond Sales and Cumulative Debt (1970 – Present)



Update 2013 Finance Planning Framework Where We Have Been - Content

Compiling Regional IRWM Plan Data



Update 2013 Finance Planning Framework Where We Have Been - Content

Compiled State Companion Plans



Update 2013 Finance Planning Framework Where We Have Been - Content

Building Update 2013 Report Narrative Around Finance Framework



Update 2013 IWM Finance Planning Framework Purpose and Applications

- **Inform future general obligation bonds**
- **Guide future legislation pertaining to finance planning and finance strategies**
- **Clarify and align State IWM funding and finance**
- **Prioritize future State IWM investment**

Update 2013 Finance Planning Framework

A New Era* in CA Water Planning and Finance

Recent interest in statewide IWM finance planning due to:

- **Sustained economic downturn**
- **Nearing full allocation of existing bond funds**
- **Reduced willingness of the public to pay for government activities**
- **Decades of deferred investment**
- **High uncertainty of future federal funding**

.....more on historical and current eras of California resource management finance in *Session 2 History of Resource Management Expenditures

Content and Flow of Information

Finance Storyboard

Update 2013 Finance Planning Framework Content and Flow of Information - Storyboard

Session 1

- 1. Scope and Outcomes**
- 2. Integrated Water Management Activities**
- 3. Existing Funding**
- 4. Funding Sustainability**
- 5. Future State Roles and Partnerships**
- 6. Future Costs**
- 7. Funding Who and How**
- 8. Trade-offs**

Volume 1 Outline

Finance Planning Framework

Update 2013 Finance Planning Framework

CONCEPTUAL DRAFT - Update 2013 Finance Framework - Introduction

Figure 1-2 Finance Planning Framework (Integrated into Volume 1)

The red text shows how the new sections of the Update 2013 finance planning framework and how it is integrated into Volume 1. It is also mapped to the storyboard as illustrated the in parentheses.

Where we are now

Ch. 1 – Introduction

About This Chapter

A Guide to Update 2013

Building on a Framework

Introduction to Integrated Water Management Finance Planning Framework

Intended Applications of Finance Planning Framework

Scope of Integrated Water Management

Content and Flow of Information

Ch. 2 - California Water Today

Variable and Extreme Resources

Land Use and Development Patterns

Water Conditions

Critical Challenges

Responses and Opportunities

Resource Management Funding History

Resource Management Funding from 1850 – Present

Federal, State and Local Government IWM Spending Summaries

Summary of Key Observations

Where we want to be

Ch. 3 – Imperative to Invest (in Innovation and Infrastructure)

A Critical Time

Paramount Challenges

Accomplishments

An Urgent Roadmap

Key Initiatives and Commitments

Consequences of Limited or Forgone Investment

Conclusion

Update 2013 Finance Planning Framework

CONCEPTUAL DRAFT - Update 2013 Finance Framework - Introduction

Ch. 4 - Companion Plans

Water Management in California
Companion State Plans and the California Water Plan
Existing Finance Strategies
Implications and Considerations

Ch. 5 - Managing an Uncertain Future

Planning Approach
Recognizing and Reducing Uncertainty
Assessing Risk
Managing for Sustainability
Planning for an Uncertain Future
Summary

Ch. 6 - Informed and Transparent Decision Making

Purpose and Motivation
Informing the Water Plan Policy Setting with Quality Information and Analysis [Vision]
Developing new technology
Finance Decision Support Tools
Prioritizing Action on Informed and Transparent Decision Making
Summary

How we will get there

Ch. 7 – Finance Planning Framework

Approach for Prioritizing State Integrated Water Management Investment
Role of Public (State government) Funding
Estimated Cost of Future Integrated Water Management Activities
Available Finance Strategies

Ch.8 - Implementation Plan

Implementation Plan Organization
Objectives and Related Actions
Finance Recommendations
Qualification of Recommendations

Draft Finance Planning Narrative

Update 2013 Finance Planning Framework Overview

Update 2013 Finance Planning Framework (Shown integrated into Volume 1) August 24, 2012

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Session 1
Topic

Chapter 1 - Introduction	Chapter 2 – CA Water Today	Chapter 3 - Imperative to Invest (in Innovation and Infrastructure)	Chapter 4 State and Federal Companion Plans
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Description and Clarification of the Role of State Government in IWM Plenary Finance Session 5			
Qualitative Only			

Scope of IWM Finance Framework

Scope of IWM Finance Framework

Table 1-1: IWM Benefit Definitions

Benefit	Definition
Affordability	Occurrence of water supplies of sufficient quality, certainty and cost to serve disadvantaged communities as well as sustain a diverse portfolio of economic activity and quality of life for all Californians.
Drought Preparedness	The magnitude and probability of economic, social or environmental consequences that would occur as a result of a sustained drought.
Energy	Efficient use, or increases in production/recovery of, energy associated with managed and unmanaged water use, storage, treatment, distribution and/or reuse.
Environmental	Preservation or restoration of the fish, wildlife, natural processes/functions and other aquatic resources for the continued viability of natural heritage, self-sustaining ecosystems and/or biodiversity. (e.g. recovery of sensitive species, control of invasive species)
Flood Damage Reduction	Reduce the adverse impacts of floods to human and natural systems through a portfolio of structural and non-structural measures that address their vulnerability, exposure and recovery during flood events. This includes pre-flood planning and hazard mitigation, emergency preparedness and response activities, and post-event repairs (including environmental infrastructure repairs).
Food Security	Adequate reliability, affordability, and supply of water, land and other natural resources to support domestic production of food, fiber, livestock, and other farm products to meet current and forecasted consumer demands. (need clarification of geographic scale; (e.g. state, nation, or world)
Fuel Load Management	Fuel reduction involving the modification of vegetation in order to reduce potential fire threat, reduce the risk of high severity wildfires thereby; (1) preserving water quality and natural water treatment processes within watersheds; (2) avoidance of downstream sedimentation impacts on water supply; and/or (3) improve wildlife habitat capability, timber growth, or forage production.
Groundwater Overdraft Reduction	Avoidance of the condition of a groundwater basin in which the amount of water withdrawn by pumping exceeds the amount of water that recharges the basin over a period of years during which water supply conditions approximate average conditions.

Scope of IWM Finance Framework

Operational Flexibility and Efficiency	Optimization of existing legal, operational and management procedures for (and/or physical modifications to) existing water management facilities to improve the efficiency of existing water operations or uses (e.g., irrigation)
Reduce Climate Change Impacts	Development and implementation of strategies that improve resiliency, reduce risk, and increase sustainability for water and flood management systems and the ecosystems upon which they depend.
Water Dependent Recreational Opportunity	Opportunities for water-dependent recreation for California's residents, communities and visitors now and into the future (e.g. skiing, fishing, kayaking, etc)
Water Quality	Chemical, physical, and biological characteristics of water, usually in regard to its suitability for a particular purpose or beneficial use for the enhancement or preservation of public and environmental health
Water Supply and Supply Reliability	Occurrence of water supplies of sufficient quality and certainty to enhance or sustain a diverse portfolio of economic activity and ecosystem health and maintain quality of life.

IWM Activity Categories

IWM Activity Categories

Investing in Innovation and Infrastructure

- **Innovation and administrative activities**
 - **Governance** (for State Government investment decisions)
 - **Planning and public process improvements**
 - **Information technology/data and tools**
 - **Water technology**

IWM Activity Categories

Investing in Innovation and Infrastructure

- **Infrastructure (*natural and human - implemented at various geographical and jurisdictional scales*)**
 - Local
 - Groundwater basin
 - Watershed
 - Regional
 - Interregional
 - State
 - Interstate
 - International
 - Tribal

Questions for Participants:

How else can this integrated water management finance framework be used?

What additional content or themes do you recommend be included in the framework?



Next Finance Session

***Follow the Money: Historical
Resource Management Expenditures***